

**Notice of Allowability**

Application No.

10/700,527

Examiner

Steven Kau

Applicant(s)

YAMAMOTO ET AL.

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to September 27, 2007.
2. ☒ The allowed claim(s) is/are 1, 3-6, 8-11, 13, 15 and 17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

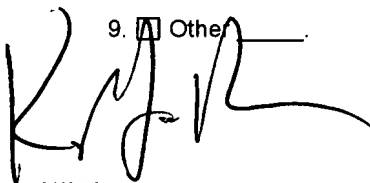
\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |



KING Y. POON

SUPERVISORY PATENT EXAMINER  
Notice of Allowability

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. The following is an examiner's statement of reason for allowance.

Claims 1, 3-6, 8-11, 13, 15 and 17 are allowable because applicant presents remark/argument on September 27, 2007 is persuasive.

With regard to claim 1, applicant presents remark/argument on pages 8-10 that "According to a first embodiment of the present invention, a processor executes a macro-scoped correction process and a macro-discrimination process, thus reducing the circuit size for macro-scoped correction process, which needs a large reference region. Furthermore, the macro-scoped correction process and the macro-discrimination process are executed after decreasing the resolution and the number of bits, as a result of which the hardware scale and the time for arithmetic operation can be reduced. In addition, macro discrimination and discrimination based on a characteristic amount are performed in combination with each other, thereby obtaining a discrimination signal having a high resolution with a high precision" and "Such features as highlighted above are not taught or suggested by Suzuki and Yamazaki, alone or in combination. Namely, Suzuki describes an area discrimination system for an image processing system, in which it is determined whether an image is a halftone image or a character image, and whereby edge emphasized signals are produced. Yamazaki describes an image processing method that performs LUT transformation on digital color signals, and whereby secondary matrix operations are performed on a color reproduction area as a

whole, but whereby secondary matrix operations are not performed or LUT operations are performed on "gray" taken as a separate entity. Still further, the specific features recited with respect to the macro-scoped process and the macro-discrimination process in claims 1 and 15 are not taught or suggested by either Suzuki or Yamazaki". The remark/argument is persuasive.

Claim 1 is a device claim and Claim 15 is a method claim, and both share the similar claim limitations.

Claims 1 and 15 have been amended and the claimed subject matters become unique and non-obvious. For instance, amended portion of the claim recites "wherein in the macro-scoped process, a pixel value is corrected by one of a smearing process in which pixel values of pixels interposed between two pixels which both have a value "1 ", and which are separated from each other by a distance of a predetermined value or less are changed to "1 ", and a majority process in which the number of pixels having pixel value "1 ", which are included in pixels close to a pixel of interest, is counted, and when the counted number is greater than a predetermined value, an output value is determined as "1 ", and when the counted number is smaller than the predetermined value, the output value is determined as "0", and wherein in the macro-discrimination process, a connected region is extracted with respect to a white background region, a halftone region, a character region and a halftone-dot region, and the extracted connected region is determined as one of a background graphic, a halftone-dot background graphic, a halftone-dot photo and a continuous photo region."

The closest prior arts in the record are Suzuki (US 5,134,667) and Yamazaki (US 6,690,487). Either by Suzuki, or Yamazaki individually, or combined Suzuki with Yamazaki do not teach or suggest the above claimed limitation.

Claims 3-6, 8-11 and 13 are dependent claims of Claim 1, and Claim 17 is a dependent claim to claim 15.

Therefore, claims 1, 3-6, 8-11, 13, 15 and 17 are allowable.

### *Conclusion*

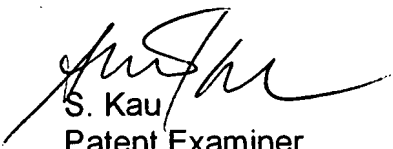
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Patent Examiner  
Division: 2625  
November 28, 2007



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